

c) Amendments to the Claims

Please cancel claims 1-15 without prejudice or disclaimer and add new claims 16-23 as follows. A detailed listing of all the claims that are or were on the application is provided.

Claims 1-15 (Cancelled)

--16. (Currently Amended) A solid state image pickup device comprising, within a pixel thereof,

a photoelectric conversion unit including a first semiconductor region of a first conductivity type, a second semiconductor region of a second conductivity type within the first semiconductor region, and a third semiconductor region of the first conductivity type disposed at a light incident side of said second semiconductor region;

a charge transfer unit for transferring a signal charge accumulated in said photoelectric conversion unit; and

a fourth semiconductor region of the second conductivity type within the first semiconductor region to receive the photo signal charge transferred;

wherein said second semiconductor region is formed by a plurality of ion implantations.

17. (New) A device according to claim 16, wherein said second semiconductor region extends under said charge transfer unit.

18. (New) A device according to claim 17, wherein said charge transfer unit is MOS transistor.

19. (New) A method of manufacturing a solid state image pickup device comprising, within a pixel thereof,
a photoelectric conversion unit including a first semiconductor region of a first conductivity type, a second semiconductor region of a second conductivity type within the first semiconductor region, and a third semiconductor region of the first conductivity type disposed at a light incident side of the second semiconductor region;
a charger transfer unit for transferring a signal charge accumulated in said photoelectric conversion unit; and
a fourth semiconductor region of the second conductivity type within the first semiconductor region to receive the photo signal charge transferred;
said method comprises a plurality of ion implantations to form said second semiconductor region.

20. (New) A method according to claim 19, wherein said plurality of ion implantations are performed respectively under different ion injection conditions.

21. (New) A method according to claim 20, wherein the ion injection condition is a condition in an ion injection angle.

22. (New) A method according to claim 20, wherein the ion injection condition is a condition in an ion injection energy.

23. (New) A method according to claim 26, wherein the ion injection condition is a condition in dose of an ion injection.--